

Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references because the cited references fail to teach each claim limitation.

The non-final Office Action dated March 26, 2008, indicated that claims 1, 8-9 and 38-39 stand rejected under 35 U.S.C. § 112(2); claims 1-20, 38-39 and 43 stand rejected under 35 U.S.C. § 102(b) over Burr (US 5,985,727); claims 21-36 stand rejected under 35 U.S.C. § 102(b) over Goo (US 5,677,215); and claim 37 stands rejected under 35 U.S.C. § 102(b) over Armstrong (US 4,062,699).

Regarding the rejection under 35 U.S.C. § 112(2) of claims 1 and 38-39, Applicant respectfully traverses the rejections. The Office Action fails to provide an analysis of why the claims are unclear. M.P.E.P. 2173.02 states that: “If upon review of a claim in its entirety, the examiner concludes that a rejection under 35 U.S.C. 112, second paragraph, is appropriate, such a rejection should be made *and an analysis as to why* the phrase(s) used in the claim is “vague and indefinite” should be included in the Office action” (emphasis added).

The limitations in question are directed to a first region that is dominated by a first polarization and a second region that is dominated by a second polarization. Applicant respectfully submits that this claim language is clear and that the Office Action has failed to provide the requisite analysis regarding the rationale behind the rejection. Notwithstanding, Applicant wishes to facilitate prosecution and has made minor amendments to the claim language. Applicant believes that the rejections are now moot, as the term polarization is no longer used. Should the Office Action wish to provide clarification of what is alleged as being indefinite (and an analysis as to the basis of the alleged indefiniteness), Applicant would appreciate an opportunity to respond, preferably by presenting a non-final office action. For the aforementioned reasons, Applicant respectfully requests that the rejection be withdrawn.

Regarding the rejection under 35 U.S.C. § 112(2) of claims 8-9, Applicant respectfully traverses the rejections. The Office Action objects to the use of the term “preponderantly” as being indefinite. The word preponderantly is generally interchangeable with predominantly. Applicant respectfully submits that preponderantly modifies “is located.” Thus, claims 8 and 9 specify what region the gate is predominantly/preponderantly located over. In an effort to facilitate prosecution,

Applicant has amended the claims to replace preponderantly with predominantly. Applicant respectfully submits that the claims are definite and requests that the rejection be withdrawn.

Applicant respectfully traverses the rejection of each claim for failing to show correspondence to each claim limitation. Applicant respectfully submits that the Office Action fails to meet the initial burden necessary to establish a valid rejection. In order to comply with 35 U.S.C. § 132, sufficient detail must be provided by the Examiner regarding the alleged correspondence between the claimed invention and the cited reference to enable Applicant to adequately respond to the rejections. *See, also, 37 CFR 1.104* (“The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.”) and M.P.E.P. § 706.02(j), (“It is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply.”)

Applicant respectfully notes that almost no analysis-based rationale has been provided in the rejection. Specifically, the entire discussion of each rejection in the present Office Action is no more than a repeat of Applicant’s claim verbatim and a citation to, at most, a single figure and one passage. No attempt has been made to provide Applicant with an analysis of alleged correspondence to each claim limitation. Applicant respectfully submits that the cited portions do not appear to correspond to various limitations; however, as the Office Action has not explained the relevance of the cited portions, Applicant is unable to ascertain, with any certainty, how the Office Action may be interpreting the claim limitations and/or the teachings of the cited references. Accordingly, the rejections are improper and Applicant respectfully requests clarification and an opportunity to respond so that a clear issue can be established before a final office action.

In an effort to facilitate prosecution, Applicant has made a number of assumptions regarding the intent of the Office Action. Should the following discussion not be consistent with the Office Action’s (as yet undisclosed) interpretation, Applicant respectfully requests clarification and an opportunity to respond as consistent with the requirements of 35 U.S.C. § 132, 37 CFR 1.104 and M.P.E.P. § 706.02(j).

For the purposes of the following discussion, Applicant assumes the following regarding Fig. 1 of Burr: sections 38 and 47 are alleged to correspond to limitations directed to the first and second regions; section 42 is alleged to correspond to the gate and section 44 is alleged to correspond to the intermediate region.

With specific regard to claims 1-17, Applicant respectfully traverses the rejection under Burr for failing to show correspondence to each claim limitation. For example, Applicant submits that Burr does not teach modulating the effective length of section 44 in response to the gate. Specifically, the claims require that the length extends between two junctions. Applicant respectfully submits that Burr does not teach modifying the distance between two such junctions.

Moreover, Applicant notes that the rejections of claims 2-11, 15 and 17 each improperly rely upon a citation to Col. 4, lines 6-10. Applicant respectfully submits that the cited passage appears to have little relation to the various claim limitations. For convenience, the passage cited by the Office Action is reproduced below:

retrograde profile that increases with distance from the semiconductor substrate top surface such that the concentration of dopant atoms of the first conductivity type is lower in the channel region than in a region immediately below the channel region. Thus, the maximum dopant atom concentration in the pocket region should reside beneath the channel region. The advantages of this invention are most

Applicant requests clarification as to the relevance of this passage (discussion doping concentrations at different depths) to the various limitations of claims 2-11, 15 and 17. For example, various limitations are directed to avalanche breakdown conditions, high bias voltage, low bias voltage, gate location and reverse-bias of various regions. Applicant respectfully submits that the relevance of the cited passage is not apparent, and thus (per 37 CFR 1.104), the relevance must be clearly explained. Accordingly, Applicant submits that the Office Action has not presented a proper rejection, and further, that the Burr reference does not appear to teach correspondence to numerous claim limitations. For the aforementioned reasons, the rejection is improper and should be withdrawn.

Regarding claims 18-20 and 38, Applicant respectfully traverses the rejection for failing to show correspondence to each claim limitation. The Office Action erroneously relies upon Fig. 1 and the above reproduced passage of col. 4, lines 6-10 to show correspondence to the claim limitations. Fig. 1, the cited passage, and the Office Action fail to show correspondence to various limitations. For example, no correspondence is shown for limitations directed to a gate that is offset so as to present an electric field substantially at only one of the two junctions. Fig. 1 and the related discussion in Burr teach that the gate is located over both junctions, and thus, that the electric field is

applied to both junctions. Accordingly, the rejection is improper and Applicant requests that it be withdrawn.

Regarding claims 39 and 43, Applicant respectfully traverses the rejection for failing to show correspondence to each claim limitation. The rejection erroneously relies upon Fig. 1 and the above reproduced passage of col. 4, lines 6-10. Fig. 1, the cited passage, and the Office Action fail to show correspondence to various limitations. For example, no correspondence is shown for limitations directed to switching from a stable conductance state to a current-conductive state in which the body is in avalanche breakdown in response to an electric field or control signal from the gate. Applicant respectfully submits that the Office Action has not presented any evidence that Burr teaches operating where the body is in avalanche breakdown in response to the gate. Accordingly, the rejection is improper and Applicant requests that it be withdrawn.

Applicant respectfully traverses the rejections of claims 21-36. In an attempt to facilitate prosecution, Applicant assumes the following relative to Fig. 4 of Goo: sections 18a and 19 are alleged to correspond to limitations directed to the first and second regions; section 15 is alleged to correspond to the gate and section 13 is alleged to correspond to the intermediate region.

Applicant respectfully submits that the relied upon Fig. 4 of Goo fails to show correspondence for substantially the same reasons discussed in connection with Burr. For example, the gate is not taught to present an electric field to only one of the junctions (claims 21-29). In another example, Goo fails to show each correspondence to limitations directed to switching from a stable conductance state to a current-conductive state in which the body is in avalanche breakdown in response to an electric field or a control signal from the gate (claims 30-36).

Moreover, the Office Action alleges correspondence for each dependent claim from the same citation of Fig. 4 and cols. 3-4. Applicant has reviewed the cited columns and respectfully submits that the relevance to the various limitations presented in claims 21-36 is not readily apparent. Applicant respectfully requests that the rejections be withdrawn.

Applicant respectfully traverses the rejection of claim 37. In an attempt to facilitate prosecution, for the following discussion, Applicant assumes the following relative to Fig. 5a of Armstrong: sections 34 and 36 are alleged to correspond to limitations directed to the first and second regions; section 26 is alleged to correspond to the gate and section 24 is alleged to correspond to the intermediate region.

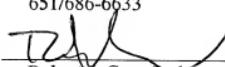
Applicant respectfully submits that the relied upon figure and cited passage fail to show correspondence to each claim limitation. For example, claim 37 includes limitations directed to two different gates. In another example, Armstrong fails to teach correspondence to limitations directed to an inverted response to an input signal coupled to both gates. Applicant respectfully requests that the rejections be withdrawn.

In view of the above discussion, Applicant believes that each of the rejections is overcome, and that the application is in condition for allowance. A favorable response is requested. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

Respectfully submitted,

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